

NOVITATES ANTILLANAE. V (1)

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MISCELLANEOUS NEW SPECIES FROM THE DOMINICAN REPUBLIC.

Three years of field work in the Dominican Republic have accumulated a large number of collections, which are being worked upon as time permits; the new species here described form a continuation of the previously published paper by the author: *Novitates Antillanae*. IV. Mem. N.Y. Bot. Garden 21 (2): 107-157. 1971. As exploration continues in Hispaniola, one gets to realize that the flora of the island is one of the richest in the Caribbean, chiefly if we consider the species density in the various islands. Oddly enough, Hispaniola was the first place in the West Indies to be visited by botanists, and nevertheless there are still many places awaiting exploration; it is still easy to collect rare plants within a relatively short radius from the main cities in the Dominican Republic.

LONCHOCARPUS ELLIPTICUS Alain, sp. nov.

Frutex gracilis 1-2 m altus, pauciramosus, novelli terti dense ferrugineo-furfuracei, vetustiores grisei lenticellosi; stipulae oblongae, 1 mm longae; folia simplicia elliptica vel obovato-elliptica, 2.5-5 cm longa, 1.5-3 cm lata, apice obtusa vel rotundata, basi rotundata vel obtusa nervo medio supra prominulo subtus prominente, lateralibus utroque latere 5-8, supra in sulco prominulis, subtus prominentibus, ad marginem antrorse curvatis, margine integra, supra in statu juvenili dense brunneo-pilosa, mox tenuiter pilosula, bullata, subtus dense pallide brunneo-pilosa, nervis fuscatis coriacea. Inflorescentiae cum pedunculo usque 5 cm longae, dense rufo-pilosulae, bracteae lanceolatae 2 mm longae, pedicelli primarii 1.5-2 mm longi, prophylla ovata vel deltoidea, 2 mm longa; flores subsessiles, calyx campanulatus 4 mm longus, dentibus depressis 0.2 mm altis; corolla violacea, vexillum 1 cm longum explanatum 8 mm latum, apice rotundatum vel leviter emarginatum, basi abrupte in unguiculum 0.5 mm longum contractum, ad centrum

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viridis; alae carina connatae oblongae 8 mm longae, apice rotundatae, 2.5 mm latae, ungue 2.5 mm longo; carinae petala basi libera ad medium connata, ad apicem breviter libera, apice rotundata, ungue 2 mm longo; stamen vexillare basi ipsa liberum caeterum cum aliis connatum, omnia in parte 1/4-1/5 superiore libera, antherae ovatae uniformes 0.8 mm longae, ovarium lineare 8 mm longum brevissime et dense pilosum, stylus incurvus glaber, stigma leviter capitatum; legumen non visum.

Type. On limestone rocks, near the bottom of a gorge, Hoyo de Pelempite, Baoruco Mts., Pedernales, 3-8 July 1971, Alain Liogier 18133 (holotype, NY; isotypes, US, GH, P, IJ); 6 Nov 1969, A. Liogier 16727, sterile (NY).

This species stands out in the genus for its 1-foliolate leaves; it resembles somewhat L. neurophyllus Urb., in which the leaves are 5-9-foliolate, the leaflets are glabrescent above, the inflorescence is larger and branched, densely ferrugineo-pubescent, the wings of the corolla are free from the carina. There is another species of 1-foliolate Lonchocarpus, L. monophyllus Urb., from Anse a Chaud, Barahona, which has linear-lanceolate leaves, acute at the apex; the leaves are glabrescent, with the midnerve impressed above.

Lonchocarpus pyenophyllus Urb., known heretofore from the type collection in Haiti (Anse a Pitre), has since been collected in the Cabo Rojo area, Pedernales (Alain Liogier 13739, 16633), the only known locality in the Dominican Republic; it is conspicuous because of its lanceolate, glabrescent leaflets 4-8 mm wide. Our specimen has 1-3-foliolate leaves. Add to the original description:

Legumen lineare 1.5-4 cm longum 6 mm latum, obscure brunneorubrum, apice rotundatum, breviter et sparse pilosulum.

BERNARDIA FRUTICULOSA Alain, sp. nov.

Fruticulus decumbens ca. 40 cm altus, monoecus, ramuli teretes pilosuli, vetustiores grisei glabrescentes; stipulae lineari-subulatae, ca. 1 mm longae, pilosulae; folia: petiolus 1-2 mm longus, pilosulus, lamina elliptica vel oblongo-elliptica, basi et apice rotundata vel obtusa, vel apice versus sensim angustata, 2-2.6 cm longa, 1-1.3 cm lata, nervo medio supra impresso subtus prominente, lateralibus utroque latere 3-4 supra leviter impressis subtus prominulis, venis supra nullis subtus paucis tenuibus, supra glabra vel pilis simplicibus sparsissimis obsita, in sicco

griseo-viridia, subtus ad nervos et venis parcissime pilis stellatis suffulta, pallidiora, margine breviter dentata. Inflorescentiae masculae globosae in axillis superioribus pedunculi usque 4 mm longi, pilis simplicibus pubescentes, bracteae 1-3, late ovatae vel triangulares, 1.5 mm longae et latae, acutae, flores in quaque bractea 1-3, pedicelli usque 1.5 mm longi, rubri; sepala 4 viridia in aestivatione valvata libera ovato-elliptica acuta, 1.5 mm longa dorso pilis simplicibus obsita 1-nervia, petala nulla; disci glandulae nullae, stamina libera, in aestivatione glomerulum globosum formantia, filamenta linearia 0.5 mm longa, antherae subquadratae lateraliter dehiscentes, squamulae inter filamentos minutissimae oblongae pro staminodiis estimandae, ovarii rudimentum nullum. Inflorescentiae femineae axillares pauciflorae, bracteae ovatae, ca. 1.5 mm longae pilosae; sepala 3 late ovata, 1.5 mm longa et lata, extus pilosa, petala nulla, discus basi sepalis adnatus superne liber, basim ovarium cingens lobulis inaequalibus; ovarium globosum obtuse trigonum, dense pilosum; styli multiramosi 2-2.5 mm longi; capsula non visa.

Type. Deep gorge among limestone rocks mixed with bauxite, Aceitillar-Cayo, Sierra del Baoruco, Pedernales, alt 1,300 m, 9 Feb 1969, Alain Liogier 13693 (holotype, NY; isotypes, US, GH, IJ, P).

I have seen nothing alike in this genus; the small leaves, the short globose pistillate inflorescence, the decumbent habit are good distinguishing characters; all other species have larger leaves, and usually larger inflorescence; the other endemic species in Hispaniola, B. tenuifolia Urb. has leaves 2-6 cm long, the parts are provided with 2-branched or simple hairs, the scales in the staminate flowers are at the center, the pistillate flowers have 4-5 sepals.

THOUINIDIUM INAEQUILATERUM Alain, sp. nov.

Arbor parva gracilis usque ad 8 m alta vel frutex; rami brunnei vel griseo-brunnei, sparse lenticellosi, ramuli teretes patente pilosuli brunnei; folia pari-pinnata, 1-3-juga rachis cum petiolo usque 5 cm longa pilosula; foliola opposita 1 mm longe petiolata, ovata vel ovato-orbiculata, valde inaequilatera 2.5-5 cm longa, 2-3.8 cm lata, apice rotundata vel emarginata, basi rotundata usque subcordata, latere proximo breviora, margine integerrima plana, chartacea, nervis lateralibus utroque latere 3-5, vel obsolete, venis dense reticulatis, supra nitidis subtus opaca, glabra. Paniculae densiflorae usque 10 cm longae, adpresse pilosulae, pilis antrorsis; bracteae ovato-oblongae, 1 mm longae, pedicelli usque 2 mm longi. Flores fragantes, sepala 5, oblonga vel oblongo-elliptica, imbricata, exteriora breviora, 2 mm longa

interiora 3 mm longa, omnia apice rotundata extus pilosula brunnea margine pallidiora intus glabra; petala 5 alba, basi ungue angusto 2 mm longo munita, limbo suborbiculari 3 mm diam, utroque latere adpresse antrorse pilosa, intus supra unguem squama semiorbiculari dense pilosa munita, discus annularis crenatus; stamina 8, filamenta 1-1.5 mm longa antrorse pilosa, antherae sagittatae 1 mm longae; ovarium trilobulatum viride 3 mm longum apice sparse pilosulum, stylus columnaris apice paullo dilatato 1.5 mm longo. Fructus loculi 1.5 cm longi 1 cm lati alae 1.5-2 cm longae, 1 cm latae, reticulatae nitidae margine dorsali recto ventrali undulato, apice rotundatae vel attenuatae.

Type. On dogtooth limestone rocks, near sea level, Cabo Rojo, Pedernales, 3-7 July 1971, Alain Liogier 18114 (holotype, NY; isotypes, US, GH, P, IJ).

This tree is very common around Cabo Rojo and on the dogtooth limestone between Cabo Rojo and Oviedo, growing at altitudes from sea level to about 200 m. The white flowers are really beautiful, fragrant and visited by bees.

This species is related to T. pinnatum (Turp.) Radlk.; the main differences are as follows:

- a. Leaflets obovate-oblong, the midrib central, subacute to attenuate at base; petals about 3 mm long with a claw nearly as wide as the blade, sepals oblong. T. pinnatum.
- a. Leaflets ovate to ovate-orbiculate, the midrib conspicuously off-center, the distal half wider; petals 5 mm long, the claw narrow; sepals rounded. T. inaequilaterum.

CISSUS RUBRINERVIA Alain, sp. nov.

Scandens ramosa, usque 8 m longa, rami striati vetustiores tuberculati, ramuli praesertim ad nodos pilosuli, stipulae orbiculares 3-4 mm diam, folia alterna petiolo 3.5-5.5 cm longo in sicco striato, apice piloso, foliola 3, lateralia 3-5, terminale 5-6 mm longe petiolulatum, terminale rhombeum vel oblanceolatum, 6-12 cm longum, 3-5.5 cm latum, apice breve acuminatum basi longe angustatum, basalia oblique obovata, apice rotundata vel obtusa, basi angustata 4.5-6 cm longa, 2.5-4 cm lata, omnia supra nervo medio in sulco prominulo, lateralibus obsolete vel utroque latere 3-4 leviter prominulis, subtus prominentibus, in vivo rubris, margine dentibus subulatis brunneis 1 mm longis suffulta, supra glabra opaca, subtus ad nervos pilosula, venis nullis membranacea. Inflorescentiae axillares laxiflorae cum pedunculo usque 14 cm longae pedunculi et pedice lli 2-4 mm longi, calyx depressus, margine integer, undulatus, 2 mm diam, discus bene evolutus, 4-crenatus, petala flavescentia 3 mm longa, triangularia, cucullata apice inflexa, filamenta 0.7 mm lon-

ga antherae ovatae, stylus 1 mm longus; bacca (in paratype A. Liogier 16207) obovata 6 mm longa, stylo persistente coronata.

Type. In woods at the base of a cliff, limestone outcrops, Carlos Díaz, Cordillera Septentrional, 19 Sep 1968, Alain Liogier 12722 (holotype, NY; isotypes, US, GH, P., IJ); in thickets at the base of a cliff, Sierra de Yaroa, limestone crest facing the Yaroa valley, Puerto Plata prov., alt 800-850 m, 2 Oct 1969, Alain Liogier 16207 (NY, US, GH, P, IJ).

This plant is peculiar by its red nerves on the underside of the leaves; its red inflorescence with creamy petals is similar to many other species in this genus. In the Antilles we have three similar species, C. tuberculata Jacq., C. microcarpa Vahl, and C. rhombifolia Vahl. C. tuberculata has smaller leaves, its flowers are smaller and red, the stipules are triangular and much smaller; C. microcarpa has acuminate leaflets, smaller flowers and shorter inflorescence; C. rhombifolia has more ovate leaflets, all are also acuminate, the flowers are also much smaller and the stipules are oblong.

OSSAEA GRACILIS Alain, sp. nov.

Frutex 1.5 m altus, rami hornotini teretes pilis brevibus brunneo-furfuracei vetustiores brunnei glabrescentes; folia petiolis parium subaequilongis 2-2.5 mm longis teretibus indumento ramorum praeditis suffulta, anguste ovato-lanceolata, 1.3-2.8 cm longa, 4-8 mm lata, apice versus sensim acuminata apice ipso rotundata, basi obtusa vel rotundata, e basi trinervia nervo medio supra impresso subtus prominulo lateralibus supra vix impressis subtus leviter prominulis, nervis lateralibus supra obsolete subtus utroque latere 8-12, tenuibus, venis subtus laxe reticulatis supra pilis brevissimis sparse strigosa, subtus ad nervos brunneo-furfuracea multo pallidiora, margine integra ciliata, membranacea. Flores axillares solitarii, pedunculi usque 3 mm longi, bracteae oblongae vel ovatae, usque 0.7 mm longae, obtusae, pedicelli filiformes 8-11 mm longi, indumento ramulorum, 1-1.5 mm sub calyce bracteolis 2 linear-oblongis 0.6 mm longis muniti; calycis tubus obovatus griseo-furfuraceus, 2.7 mm longus, lobi 4 lineares 0.8 mm longi; petala rubra vel rosea, triangularia, acuta, 1.8 mm longa, basi 1 mm lata; filamenta 1 mm longa, antherae 1 mm longae, connectivo infra loculos non producto, stylus 3 mm longus, stigma convexum stylo parum crassior.

Type. Common in underbrush, in cloud forest, Monteada Nueva, "Caña Brava", alt. 1,300 m, Barahona Mts., 15 Jun 1968, Alain Liogier 11622 (holotype, NY; isotypes, US, GH, P, IJ); 29 Feb 1969, Alain Liogier 14249 (NY, GH, US, P, IJ).

This shrub at first sight reminds the collector of some spe-

cies of Clidemia, particularly C. insularis Domin (C. capillaris Griseb., not D. Don) and C. fuertesii Cogn.; the petal shape clearly belongs to Ossaea; the unique size and shape of the leaves, the capillary pedicels, the solitary flowers distinguish this species from all other Ossaea species in Hispaniola.

Considering the closeness of the two genera, Ossaea and Clidemia, I have come to question the usefulness of keeping them apart on the basis of the petal shape only, which is rounded in Clidemia and acute to acuminate in Ossaea. Though unable to find any other differences, the separation of two genera by the petal shape only seems to be a consistent character in several well-defined genera, as can be gathered from the literature on the subject.

CYNANCHUM PARVIFLORUM (R. Br.) Alain, Bull. Torr. Bot. Club 90: 191. 1963.

This species heretofore known from Puerto Rico and the Lesser Antilles has been collected by the author in several places in the Dominican Republic: Copey, Montecristi, Alain Liogier 16387; Piedra Gorda, Santiago, A. Liogier 12665, 13534; Jaiquí Picado, Santiago, A. Liogier 15214; Oviedo to Los Salados, A. Liogier 16992.

The Hispaniolan specimens have smaller leaves, but the other characteristics completely agree with the description and with the specimens available; the most important character is the stipitate gynostegium.

CYNANCHUM PENICILLATUM (Griseb.) Alain, Mem. Soc. Cub. Hist. Nat. 22: 118. 1955.

This species was until now considered as an endemic to Cuba; the specimens collected by me in the Dominican Republic show the same characters with slight variations in the location of the barbs inside the corolla lobes, these in the Cuban specimens are at the very tip of the petals on the inner side, while in the Dominican Republic specimens they are slightly below the tip. This species seems to grow always on serpentine soil. DOMINICAN REPUBLIC: Barrancon, Bonao, Alain Liogier 14870, 15177; Loma del Puerto, Jarabacoa, A. Lavastre 892; A. Liogier 12434, 15728; Sierra Prieta, Villa Mella, A. Lavastre 1982, 1333; La Manaclita, La Vega, A. Liogier 15824; La Leonor, Monción, A. Liogier 13256.

MATELEA SYLVICOLA Alain, sp. nov.

Scandens 1.5 m alta, rami teretes striati sparse pilosi; folia petiolis 8-10 mm longis, lamina oblongo-lanceolata, 7.5-9.5 cm longa, 1.2-1.5 cm lata, apice longe acuminata, basi rotunda-

ta nervo medio supra impresso ad basim glandulas 2 oblongas brunneas obsito, subtus appanato vel prominulo, lateralibus nullis vel utroque latere 10-15, membranacea glabra margine integra; inflorescentiae sessiles 1-3-florae, pedicelli 1-2 cm longi minute pilosuli, basi bracteas 1-2 lineares usque 2.5 mm longas gerentes; sepala ovato-acuminata, 5 mm longa ad basim 2 mm lata, glabra; corolla rotacea 1.5-2 cm diam, viridis, ad centrum brunnea, usque ad medium gamopetala, lobi semi-elliptici 7 mm longi basi 5-7 mm lati utrinque glabri, utrunque praesertim supra in fundo flavescente brunneo-reticulati membranacei corona exterior valde evoluta cupuliformis 0.8 mm alta in lobis 5 oblongis 1 mm longis producta, interior laciniis filiformibus 1 mm longis reducta; pollinia reniformia 0.4 mm longa flavida, brachii breves, glandula brunnea 0.1 mm longa.

Type. In wet ravine, in forest, Ciénaga de la Culata, Constanza, alt 1,600-1,700 m, 15-16 Oct 1968, Alain Liogier 13029 (holotype, NY; isotype, US); in woods, Cabezada de la Ciénaga de la Culata, Constanza, alt 1650 m, 16 Oct 1968, Alain Liogier 13069 (NY, US).

This species reminds M. annulata Alain, but this last species has lanceolate-spiculate sepals 1 cm long, the corolla lobes are ovate, 7-8 mm long, the corolla is ring-shaped, crenate at the rim, without appendages. The leaves are shorter (4-5 cm long) and not long-acuminate. M. oblongata (Griseb.) Woods. has similar leaves, but the flowers are much smaller and of different shape, always campanulate, never rotate.

MATELEA VIRIDIVENIA Alain, sp. nov.

Volubilis usque 1.5 m longa; rami teretes pilosi, non striati, ramuli dense retrorso-patenti-pilosi; folia 2-4 mm longe petiolata, oblonga vel obovato-oblonga, 8-11 mm longa, 2-4.5 mm lata, apice rotundata breviter apiculata, basi angustata, nervo medio supra leviter impresso, subtus prominulo, lateralibus nullis, supra et subtus breve patenti-pilosa, membranacea, viridia. Flores plerumque solitarii axillares, pedicelli 3-4 mm longi breviter pilosi, bracteae lineares 0.8 mm longae, sepala lineari-subulata 3 mm longa basi 0.8 mm lata, extus pilosa; corolla albescens lineis viridibus reticulata, rotata 12 mm diam, lobis 5 late triangularibus apice acutis 2 mm longis 4 mm latis infra pilosis extus pilosis membranaceis; gynostegium sessile leviter 5-angulare, 5 mm diam, coronae lobi basi liberi oblongi 2 mm longi, gynostegio longiori; pollinia ovalia 0.3 mm longa, brachiis subnullis, glandula triangulari-sagittata brunnea.

Type. Common in thickets in open place on dry dogtooth limestone along seashore, Cabo Rojo, Pedernales, 4 Nov. 1969, Alain Liogier 16637 (holotype, NY; isotypes, US, GH, P, IJ); about 5 miles E of Cabo Rojo, 8 Feb 1969, Alain Liogier 13620

fruiting specimen (NY); in thickets, km 92 from Bani to Azua, alt 80 m, 3 Nov 1969, Alain Liogier 16598 (NY, US, GH, P); on limestone, los Guanitos, 7 miles E of Cabo Rojo, Pedernales, 13 Nov 1969, Alain Liogier 16961b (NY, US, GH, P, IJ).

A. Liogier 13620 and 16961b are fruiting specimens; the description of the follicle is as follows:

Folliculi (juvenili) oblongo-lineares, apice longe acuminati, 4.5-5 cm longi, basi 10-12 mm lati, subglabri, tuberculis carnosus obtecti; semina non visa.

This species falls in the relationship of M. alainii Woods., which can be distinguished by its suborbicular leaves, its ovate acute calyx lobes, the green corolla without reticulation, the corolla lobes hyaline on the margin, much narrower and ovate-lanceolate; the pollinia are pyriform and the follicles are only 3 cm long, the corona lobes are oblong in M. viridivenia, while in M. alainii they are much reduced.

SOLANUM COELOCALYX Alain, sp. nov.

Arbor inermis, ca. 12 m alta, rami dense griseo-stellato-furfuracei, ramuli dense albido-stellato-furfuracei; folia petiolis 1.5-3 cm longis supra canaliculatis suffulta, lamina anguste elliptico-oblonga, basi inaequilatera auriculata vel rotundata et leviter excisa, apice acuta vel breviter acuminata 12-18 cm longa, 4-6 cm lata, nervo medio et lateralibus (utroque latere 6-10) supra impressis subtus prominentibus, lateralibus ad marginem anastomosantibus, venis laxe reticulato-conjunctis, supra obscure viridia sparse pilis stellatis obsita, subtus albo-grisea dense pilis stellaribus breve stipitatis obtecta, margine plana integra membranacea. Inflorescentiae plerumque axillares corymbosae, cum pedunculo 4-5 mm longo 10 mm longae dense griseo-pilosae; pedicelli usque 3 mm longi, calyx in alabastra 4-5 mm longum clausum, praeter lineas 5 longitudinales stellato-pilosum, ad anthesim irregulariter, saepe in lobulos 2 adaperiens, corolla rotacea, violacea, 2.5-3 cm diam, extus stellato-pilosa, intus glabra, lobi 5 ovati 1 cm longi; stamina 5, filamenta vix 1 mm longa, antherae lineari-lanceolatae 6-6.5 mm longae a basim angustatae; stylus 3 mm longus, basi versus stellato-pilosus, ad apicem glaber. Fructus ignotus.

Type. In a ravine, El Montazo, from Constanza to Valle Nuevo, remnants of cloud forest, alt 1,200-1400 m, 12^{Apr} 1969, Alain Liogier & E.J. Marcano 14716 (holotype, NY; isotypes, US, GH, P, IJ).

The most distinguishing feature of this new taxon is the calyx that does not open into 5 lobes as it does in the other species, but splits open irregularly, sometimes forming two lobes, one wider, with three sections, the other one narrower with only two sections, at other times the upper part detaching

itself irregularly like a lid with a jagged rim. This feature seems to be unique in the genus. It appears that the five lobes are well marked, suggested by the 5 glabrous lines on the closed calyx. The absence of fruiting specimens does not allow a complete diagnosis.

The presence of a tree in this genus in the West Indies is a rare case; another tree-like plant, *S. plumieri* Dun., has slightly lobed leaves, the flowers are sessile on the trunk; this last species is known from Plumier's drawing only, and has not been collected by modern botanists.

TABEBUIA CRISPIFLORA Alain, sp. nov.

Frutex usque 1.25 m altus, ramuli glabri verrucosi, vetustiores grisei cortice striati; folia petiolis usque 1 cm longis supra applanatis verrucosis glabris brunneis suffulta; foliola 3-4, petiolulis superioribus 4-6 mm inferioribus 1-3 mm longis, ovato-oblonga, vel obovata, basi angustato-cuneata, acuta vel obtusa, lateralia saepe inaequilatera apice rotundata ad obtusa vel breviter cuspidata, terminalia usque 7 cm longa, et 3.5 cm lata, lateralia 2.5-6 cm longa, 1.2-3.4 cm lata, nervo medio supra impresso subtus bene prominente, lateralibus utroque latere 3-5, supra obsolete vel leviter impressis subtus prominulis venis subtus obsolete, margine plana vel leviter recurva, utrinque glabra, supra sub lente sparse punctata, subtus pallidiora nigro-punctata et lepidota, coriacea. Inflorescentiae terminales pauciflorae, pedunculo 5-6 mm longo, corymbosae, nigro-lepidotae, bracteae lineares 5-6 mm longae; pedunculi secundarii 2, semel vel bis furcati, pedicelli usque 2.5 cm longi, bracteolas 2 lineares 2-2.5 mm longas gerentes, alabastra ovata, breviter apiculata, clausa 12 mm longa; calyx cylindraceus 1.5 cm longus ad apicem 8 mm latus, nigro-lepidotus 6-7-costatus, lobi 4, late triangulari 3-5 mm longi; corolla 3.2 cm longa, rubro-testacea, tubo 2.8 cm longo, cylindraceo, ad apicem ampliatus, lobi semiorbiculari antice rotundati 0.5 cm longi irregulariter plicati; stamina 4 mm supra basim corollae ab annulo piloso abeuntia; filamenta breviora 13 mm, longiora 16 mm longa, antherarum loculi 3 mm longi; ovarium lineare 7 mm longum, dense lepidotum, stylus 2 cm longus, glaber, stigmata suborbicularia; fructus non visus.

Type. On limestone cliff, Cueva de Boucan Calice, E of Aceitillar, Sierra de Baoruco, alt 1,100 m, Pedernales, 13 Feb 1969, Alain Liogier 13844 (holotype, NY; isotypes, US, GH, IJ, P); on the rim of a gorge, on limestone mixed with bauxite, Aceitillar-Cayo, deep gorge among pine forest, Sierra de Baoruco, Pedernales, alt 1,300 m, 9 Feb 1969, Alain Liogier 13667 (NY); 22 Feb 1969, Alain Liogier 14096 (NY, US, GH).

Among the many species of *Tabebuia*, the nearest seems to be *T. domingensis* (Urb.) Britt.; this latter has lepidote branches, the leaflets are rounded or suboblique at the apex, the

corolla is longer (up to 6 cm long); both have a ring of hairs at the level of the stamen attachment inside the corolla. This species has punctate leaves, the punctuation produced by the presence of dark scales which look like small glands in the leaf tissue. This is particularly visible in the young leaves; the inflorescence shows the same peculiarity.

The specimens from Aceitillar-Cayo have somewhat shorter leaves and some reticulation on the lower face.

TABEBUIA OPHIOLITHICA Alain, sp. nov.

Frutex gracilis vel arbor parva, 6-7 m altus; rami erecto - patenti, ramuli quadranguli cortice griseo glabri; novelli dense brunneo-lepidoti; folia petiolis usque 1.5 cm longis, supra applanatis glabris, foliola 3-5, petiolulis 3 apicalibus 10-12 mm, basalibus 1 mm longis, omnibus supra canaliculatis, oblongo-obovata vel elliptico-obovata, superiora 12-18 cm longa, 5-8 cm lata, inferiora minora 4.5-12 cm longa, 2.5 cm lata apice rotundata obtusa vel acuta, basi rotundata leviter excisa, nervo medio supra impresso, subtus prominente, lateralibus utroque latere 7-11, supra impressis subtus prominulis, venis supra obsolete vel in foliis vetustioribus laxe reticulatis subtus patente reticulatis, margine recurva, coriacea glaberrima in sicco pallide brunnea. Inflorescentiae compactae, racemosae, multiflorae, in apice ramorum, pars basali ramorum e cicatricibus florum delapsorum nodosa, apice multiflora; alabastra ovata, clausa, apiculata, 8 mm longa, bracteae filiformes, ad basim pedunculorum 2, 6 mm longae sparse brunneo-lepidotae; pedicelli filiformes usque 2.5 cm longi; calycis tubus campanulatus sparse lepidotus, 7 mm longus, limbo bilabiato, labio superiore integro, 4 mm longo, acuto, inferiore 3-lobato, lobis 2 mm longis; corolla rosea 5.5 cm longa, tubus campanulatus ca. 3 cm longus, apice 13 mm latus, limbus in statu compresso 4.5 cm lato, 2.5 cm longo, lobi rotundati 1 cm longi, glabra, margine ciliata, stamina 5-6 mm supra basim corollae ab annulo piloso abeuntia, filamenta 8 et 12 mm longa, antherarum loculi oblongi 2 mm longi; ovarium ovato-lineare, dense lepidotum 3.5 mm longum, 4-angulare, longitudinaliter striatum, stylus 2 cm longus, glaber, stigmata suborbicularia. Fructus ignotus.

Type. In thickets at the base of a cliff, serpentine hills about 4 miles E of Gaspar Hernández, alt 50 m, 28 Sep 1969, Alain Liogier 16148 (holotype, NY; isotypes, US, GH, IJ, P).

I refer to this same species specimens from Arroyo Francés Puerto Plata, growing also on serpentine, Ekman 14385 and A. Liogier 16136, with smaller leaves, but with the same crowded inflorescence, long linear bracts, filiform peduncles.

Though we do not know the flowers of *T. conferta* Urb., this seems to be the nearest relative to this new species. The longer petioles and petiolules, the shorter and wider leaflets with scales on both faces distinguish these two plants.

Tabebuia haemantha (Bert.) DC. has a paniculate inflorescence, the calyx is much longer, the corolla is bright red or crimson, the petioles and petiolules are longer.

GESNERIA FILISEPALA Alain, sp. nov.

Frutex gracilis 3 m altus, rami pauci, superne cicatricibus p etiolorum delapsorum tuberculatis notati, ramuli griseo-puberuli vel pulverulenti, ad apicem dense foliosi; folia petiolis 4-5 mm longis supra leviter canaliculatis basi incrassatis suffulta, lamina obovato-oblonga, basi angustata not in petiolum protracta, apice acuta vel obtusa, raro subtruncata, 2.5-3.5 cm longa, 9-17 mm lata, nervo medio supra per totam longitudinem impresso, subtus prominente, lateralibus supra obsolete subtus utroque latere 3-4 ad marginem arcuatis, venis supra obsolete vel reticulatis, subtus reticulatis margine recurva, ad apicem crasse dentata vel subintegra, supra nitida, subtus opaca pallidiora. Inflorescentiae axillares 2-pluri-florae, puberulae, pedunculo 2-3 mm longo, bracteae filiformes, 10-12 mm longae, pedicelli per paria ordinati, 9-12 mm longi, pulverulenti, ad basin bracteolas binas rotundatas gerentes, calycis tubus semiglobosus, 5 mm longus, lobi subulato-filiformi, usque 15 mm longi; corolla rubra, in statu juvenili 14 mm longa, lobi 2 mm longi semiorbiculati stamina 1 cm longa, antherae orbiculares ad orem corollae sitae, per paria connatae, stylus juvenilis 5 mm longus, pilosulus, stigma capitatum; capsula globosa vel oblonga, 6-8 mm longa, 5-6 mm lata, 5-costata, nervis alteris obsolete, calycis lobi 8-15 mm longi, filiformi-subulati.

Type. On limestone rocks in thickets, Hoyo de Pelempito, Bacruco Mts., Pedernales, alt 1,000 m, 3-8 July 1971, Alain Liogier 18132 (holotype, NY; isotypes, US, GH).

The long filiform bracts and calyx-lobes distinguish this plant from G. mornincola Urb. & Ekm., which has 1-flowered inflorescences, short bractlets above the middle of the peduncle, shorter corolla and calyx lobes. There are some similarities with G. aspera Urb., whose leaves are scabrous and calyx-lobes shorter.

GESNERIA SAXATILIS Alain, sp. nov.

Frutex usque 1.25 m altus, ramuli teretes, resina aurea obtiti, rami vetustiores griseo-rubri, cortice striato; folia petiolis 1-4 mm longis supra applanatis vel leviter sulcatis suffulta, obovata, cuneata vel elliptico-obovata, 1-2.3 cm longa, 6-10 mm lata, basi acutissima cuneata, apice ambitu obtusa vel subtruncata, margine ad apicem plus minus dentata, caetera integra, nervo medio supra per totam longitudinem impresso, subtus valde prominente, lateralibus supra obsolete subtus utroque latere 3-4 prominulis ad marginem conjunctis, venis non vel vix manifestis; laminacoriacea. Pedunculi axillares 1-

flori, cum pedicelli 1 cm longi, infra medium bracteolas duas lineares 4 mm longas gerentes; calycis tubus turbinatus 4 mm longus, lobi 5 lineari-subulati, intus canaliculati 7 mm longi corolla rubra 13 mm longa, extrinsecus glabra, tubus cylindraceus 3 mm latus, lobi vix semiorbiculares 1 mm longi integri; stamina 12 mm longa antherae quadratae, os corollae attingentes per paria cohaerentes; stylus 10-12 mm longus, glaber, stigma capitatum apice bilobum; capsula obovato-turbinata 5 mm longa apice 4 mm lata valde 5-costata nervis alternis nullis, calycis lobi 9 mm longi, subulati.

Type. Trail between Pedernales and Aceitillar (Aceitial), alt 4,200 ft, Aug 8-22, 1946, R.A. & E. S. Howard 8120 (holotype, NY; isotypes, GH, US); Aceitillar, Pedernales, March 23, 1967, Marcano 5261; deep gorge in limestone mixed with bauxite, Aceitillar-Cayo, Sierra de Baoruco, Pedernales, alt 1,300 m, 9 Feb 1969, Alain Liogier 13672.

These specimens have been named and distributed under the name G. mornincola Urb. & Ekm. This last species is different in many aspects: the leaves are ovate-elliptic to oblong, the margins entire or obsoletely crenulate above, more or less reticulate; the bractlets are located at the middle of the peduncle or above, and only 1.5 mm long; the calyx lobes are only 4-6 mm long and the corolla is 17 mm long, with the exerted stamens and style; the capsule has faint alternate nerves, and the calyx lobes are much shorter.

Few species of Gesneria with included anthers grow in Hispaniola: G. aspera Urb., G. parvifolia Alain and G. pulverulenta Alain. G. aspera is distinguished immediately by its scabrous leaves, and short calyx lobes; G. parvifolia has pilose leaves and the inflorescence is 1-3-flowered, the anthers are not paired; G. pulverulenta has a shorter corolla and capsule, and the vegetative parts are pulverulent, the corolla is oblique at the apex.